

R E M A R K S

Claims 1, 3 and 5-15 are now in this application, and are presented for the Examiner's consideration.

Request for Three Month Extension of Time

Applicant requests that the period for responding to the Office Action mailed September 15, 2009 and set to expire on December 15, 2009, be extended by THREE (3) months, so as to expire on March 15, 2010. Applicant is large entity.

Payment for this extension is being made with this Amendment.

Please charge any additional fees for this extension of time to Deposit Account No. 07-1524.

Declaration

Attached is a new Declaration signed by both inventors.

Objection to Drawings

The drawings were objected to as containing improper sectional views.

It was stated that the plane upon which a sectional view is taken should be indicated on the view from which the section is cut by a broken line and the ends of the broken line should be designated by Arabic or Roman numerals.

This amendment was previously made with all of the figures, except that Fig. 6A was inadvertently not amended.

Therefore, Fig. 6A has been amended to correct the same, and enclosed is a Replacement Sheet for the same.

The specification has also been amended to reflect this amendment.

Specification

It was requested that applicant check the specification to make sure that there are no minor errors.

This was done with the Preliminary Amendment filed May 13, 2006, and no further errors were uncovered.

Objection to Title

It was stated that the title is not sufficiently descriptive and a title is required that is clearly indicative of the invention to which the claims are directed.

In this regard, the title has been amended to recite
AGGREGATE MIXING APPARATUS HAVING SPHERICAL BATCH MIXING VESSEL
WITH JET PUMP TO HELP LOAD MATERIAL AND SINGLE PNEUMATIC SOURCE
TO PRESSURIZE MIXING VESSEL AND DRIVE JET PUMP.

Accordingly, it is respectfully submitted that the objection to the title has been overcome.

Prior Art Rejections

Claims 1, 8 and 11 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent Publication No. 2003/0010792 to Forshey et al.

However, it is respectfully submitted that the claims herein distinguish over Forshey et al.

In the first place, it will be appreciated that the present invention is directed to an **aggregate** mixing apparatus, that is, an apparatus for mixing solid aggregate material.

According to www.dictionary.com, the relevant definition of aggregate is:

- a) "Geology. (of a rock) consisting of a mixture of minerals separable by mechanical means" or
- b) "any of various loose, particulate materials, as sand, gravel, or pebbles, added to a cementing agent to make concrete, plaster, etc."

Support is found throughout the present application. See, for example, page 1, lines 3-4, and page 14, lines 14-16 where it is stated that the constituent materials can be sand, water and cement to make concrete.

This is very different from the liquid materials used in Forshey et al. See column 1, paragraph [0002] where Forshey et al states: "The present invention relates generally to systems and methods for mixing and/or delivering of liquid chemical(s), and more particularly, to systems and methods for mixing and

delivering liquid chemicals in precise amounts using logic devices and multi-reservoir load cell assemblies."

It is therefore submitted that a person skilled in the art would not look to Forshey et al to construct a mixing apparatus for aggregate material, such as cement. An apparatus suitable for mixing liquid chemicals in a laboratory-type environment would be different from and unsuitable for mixing abrasive solids of an aggregate material, as with the present claimed invention.

In this regard, claim 1 has been amended to recite "Aggregate mixing apparatus comprising a substantially spherical batch mixing vessel having an inlet to receive constituent solid aggregate material."

Further, the limitations of claim 2 have been added to claim 1, so that claim 1 now further recites that the batch mixing vessel is substantially spherical. This aspect is particularly suited to aggregate material, and there is no disclosure or suggestion in Forshey et al for providing the same. In fact, there would be no logical reason for Forshey et al to use such a batch mixing vessel with liquid chemicals.

Claim 1 now also recites that the batch loader includes, in addition to the conduit through which the solid aggregate material are conveyed in use by fluid flow into the batch missing vessel, a jet pump to create a vacuum to load the mixing vessel with the solid aggregate material, without the need for manual

loading. Support for this latter limitation of the jet pump is found at page 4, lines 12-15 of the present application.

Although it was stated that Forshey et al includes a conduit 1003 or 1005 through which the constituents are conveyed in use by fluid flow, there is no disclosure or even a remote suggestion in Forshey et al of using a jet pump to create a vacuum to load the mixing vessel. Even if Forshey et al uses a pressurizing device 1018 to pressurize the mixing vessel to assist in discharge of the contents therefrom, there is no disclosure or any suggestion of using a jet pump to create a vacuum to load the mixing vessel.

Lastly, since there is no jet pump, as claimed herein, in Forshey et al, there can be no single pneumatic source used both to pressurize the mixing vessel and to drive the jet pump.

Thus, Forshey et al fails to disclose or suggest the following elements and limitations of amended claim 1:

- a) an aggregate mixing apparatus,
- b) a substantially spherical batch mixing vessel,
- c) batch loader including a jet pump to create a vacuum to load the mixing vessel with the solid aggregate material, without the need for manual loading, and
- d) a single pneumatic source used both to pressurize the mixing vessel and to drive the jet pump.

In any event, since the limitations of claim 2 have been added to claim 1, and since Forshey et al alone was not used to

reject claim 2, it is submitted that claim 1 is allowable over Forshey et al.

It is further noted that a claim of substantially the same scope herein has been allowed over the prior art of Forshey et al in the corresponding U.K. application.

Accordingly, it is respectfully submitted that the rejection of claims 1, 8 and 11 under 35 U.S.C. §102(b) has been overcome.

Claim 2 was rejected under 35 U.S.C. §103(a) as being obvious from Forshey et al in view of U.S. Patent No. 4,467,080 to Brun et al.

The remarks previously made above in regard to Forshey et al are incorporated herein, and therefore not repeated.

Brun et al describes a process for polymerizing in an aqueous phase using heterogeneous catalysis and to a spherical reactor for carrying out said process, in which at least one monomer which is gaseous under the reaction conditions is just in contact with a solid catalyst in an agitated polymerization zone. See the Abstract thereof.

Brun et al is described as being used for mixing fine powdered materials in a laboratory-type situation, and not mixing aggregate materials, as with the present claimed invention. Therefore, it is submitted that there would be no motivation for one skilled in the art, seeking to address the problems solved by the present invention, to look to Brun et al, or to combine the

teachings of Forshey et al and Brun et al. This is further true since Forshey et al is directed to liquid chemicals, while Brun et al is directed to a very different operation using fine powdered material.

Further, Brun et al is still deficient as to the above discussed limitations which are also deficient in Forshey et al.

Thus, even if the references were combined, the combination would still be deficient as to the limitations of:

- a) an aggregate mixing apparatus,
- b) batch loader including a jet pump to create a vacuum to load the mixing vessel with the solid aggregate material, without the need for manual loading, and
- c) a single pneumatic source used both to pressurize the mixing vessel and to drive the jet pump.

Accordingly, it is respectfully submitted that the rejection of claim 2 under 35 U.S.C. §103(a), as applied to amended claim 1 herein, has been overcome.

Claim 3 was rejected under 35 U.S.C. §103(a) as being obvious from Forshey et al in view of U.S. Patent Publication No. 2006/0152998 to Burr et al.

The remarks previously made above in regard to Forshey et al are incorporated herein, and therefore not repeated.

Burr et al has no relation to the present invention or that of Forshey et al. Burr et al is directed to an acoustic fluidized bed.

However, there is no disclosure or even a remote suggestion in Burr et al of:

- a) batch loader including a jet pump to create a vacuum to load the mixing vessel with the solid aggregate material, without the need for manual loading, and
- b) a single pneumatic source used both to pressurize the mixing vessel and to drive the jet pump.

Therefore, even if Burr et al is combined with Forshey et al, these limitations would not be disclosed or suggested by such combination.

Accordingly, it is respectfully submitted that the rejection of claim 3 under 35 U.S.C. §103(a) has been overcome.

Claims 5 and 6 were rejected under 35 U.S.C. §103(a) as being obvious from Forshey et al in view of U.S. Patent No. 5,419,654 to Kleiger et al.

The remarks previously made above in regard to Forshey et al are incorporated herein, and therefore not repeated.

Kleiger et al has no relation to the present invention or that of Forshey et al. Kleiger et al is directed to a motor driven wheeled road patching vehicle which includes a gravel hopper and a tank of heated asphalt.

However, there is no disclosure or even a remote suggestion in Kleiger et al of:

- a) a substantially spherical batch mixing vessel,
- b) batch loader including a jet pump to create a vacuum to load the mixing vessel with the solid aggregate material, without the need for manual loading, and
- c) a single pneumatic source used both to pressurize the mixing vessel and to drive the jet pump.

Therefore, even if Kleiger et al is combined with Forshey et al, these limitations would not be disclosed or suggested by such combination.

Accordingly, it is respectfully submitted that the rejection of claims 5 and 6 under 35 U.S.C. §103(a) has been overcome.

Claim 7 was rejected under 35 U.S.C. §103(a) as being obvious from Forshey et al in view of U.S. Patent No. 4,106,111 to Rose.

The remarks previously made above in regard to Forshey et al are incorporated herein, and therefore not repeated.

Rose is the only reference remotely related to the present invention by describing a concrete making apparatus.

However, there is no disclosure or even a remote suggestion in Rose of:

- a) a substantially spherical batch mixing vessel,

b) batch loader including a jet pump to create a vacuum to load the mixing vessel with the solid aggregate material, without the need for manual loading, and

c) a single pneumatic source used both to pressurize the mixing vessel and to drive the jet pump.

Therefore, even if Rose is combined with Forshey et al, these limitations would not be disclosed or suggested by such combination.

Accordingly, it is respectfully submitted that the rejection of claim 7 under 35 U.S.C. §103(a) has been overcome.

Claims 9 and 10 were rejected under 35 U.S.C. §103(a) as being obvious from Forshey et al in view of U.S. Patent No. 6,485,171 to Wang et al.

The remarks previously made above in regard to Forshey et al are incorporated herein, and therefore not repeated.

Wang et al is merely directed to a sensor for detecting the level of circulating fluid in a tank comprises a paddle blade.

However, there is no disclosure or even a remote suggestion in Wang et al of:

- a) an aggregate mixing apparatus,
- b) a substantially spherical batch mixing vessel,
- c) batch loader including a jet pump to create a vacuum to load the mixing vessel with the solid aggregate material, without the need for manual loading, and

d) a single pneumatic source used both to pressurize the mixing vessel and to drive the jet pump.

Therefore, even if Wang et al is combined with Forshey et al, these limitations would not be disclosed or suggested by such combination.

Accordingly, it is respectfully submitted that the rejection of claims 9 and 10 under 35 U.S.C. §103(a) has been overcome.

Claim 12 was rejected under 35 U.S.C. §103(a) as being obvious from Forshey et al in view of U.S. Patent No. 6,715,195 to Erickson.

The remarks previously made above in regard to Forshey et al are incorporated herein, and therefore not repeated.

Erickson is merely directed to plastic molded fluid mixing equipment.

However, there is no disclosure or even a remote suggestion in Erickson of:

- a) an aggregate mixing apparatus,
- b) a substantially spherical batch mixing vessel,
- c) batch loader including a jet pump to create a vacuum to load the mixing vessel with the solid aggregate material, without the need for manual loading, and
- d) a single pneumatic source used both to pressurize the mixing vessel and to drive the jet pump.

Therefore, even if Erickson is combined with Forshey et al, these limitations would not be disclosed or suggested by such combination.

Accordingly, it is respectfully submitted that the rejection of claim 12 under 35 U.S.C. §103(a) has been overcome.

If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned at the telephone number given below for prompt action.

In the event that this Paper is late filed, and the necessary petition for extension of time is not filed concurrently herewith, please consider this as a Petition for the requisite extension of time, and to the extent not tendered by check attached hereto, authorization to charge the extension fee, or any other fee required in connection with this Paper, to Account No. 07-1524.

The Commissioner is authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 07-1524.

In view of the foregoing amendments and remarks, it is respectfully submitted that Claims 1, 3 and 5-15 are allowable,

and early and favorable consideration thereof is solicited.

Respectfully submitted,



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